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Industrial manpower requirements of the member states of the Organization of the Islamic Conference (OIC) and ways and means of establishing and/or strengthening training centres to serve all member countries of the OIC *

Prepared by the

secretariat of UNIDO

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EVOLVING DEMAND FOR TRAINING IN ISLAMIC COUNTRIES

The Ministers of Industry of the Organization of Islamic Conference (OIC) at their meeting on industrial co-operation among Islamic states, held in Islamabad in February 1982, considered the issue of co-operation among the member states of the organization in fostering industrial co-operation. In this connection they adopted the Islamabad Declaration which proposed a series of recommendations. The articles 10 to 16 focus on co-operation in industrial training research and development and transfer of technology. The emphasis, however, is put on co-operation in the field of training and on joint measures to be taken for the establishment and strengthening of training, research and development capabilities in the 43 member states of OIC. The above ministerial meeting had also established a task force on industrial co-operation.

The General Assembly of the United Nations on 14 November 1980 adopted a resolution on co-operation between the United Nations and the OIC. On 13 October 1982, an agreement on industrial co-operation and technical assistance was signed between UNIDO and OIC. In light of the above, UNIDO is an associate member of the task force established during the Islamabad ministerial meeting. The third meeting of the task force with UNIDO's participation was held in Istanbul between 10-12 April 1984.

The meeting requested UNIDO to prepare three papers on industrial co-operation between UNIDO and OIC for consideration by OIC's the second ministerial conference on industrial co-operation among its member states. One of the three papers is related to the training of industrial manpower and to the establishment and/or strengthening of training centres in Islamic countries. Sub-paragraph (iii) of paragraph 5 of item 14 of the report FR/TF.3/84-3 refers.

This also is in line with the strong recommendation of the ministerial standing committee on scientific and technological co-operation of the OIC adopted at its first meeting, held in Islamabad in May 1983, for the strengthening of manpower training and support facilities of its member states.

This paper examines issues in addition to those submitted by UNIDO under UNIDO/IS.92/Rev.1/Add.1. in 1981.

As a result of the experience in the field of industry the Islamic countries have increasingly become conscious of the fact that the prime obstacle to rapid industrial development is not always a lack of financial resources, but a lack of human resources, and particularly of the senior staff responsible for conceiving, developing and managing plans and projects that incorporate a technology suitable to the local socio-economic environment.

The need for qualified industrial personnel is continually growing, and existing training programmes and educational and training infrastructures do not always meet this need.

Many Islamic developing countries have made striking progress in creating an educational base for their development - in terms of numbers and kinds of institutions and the percentage of their people attending them. Educational structures, however, vary among countries, so that specified levels of educational achievement, even though expressed in years of schooling, do not represent the same degree and quality of education or industrial training from one country to another. Although the present paper is concerned with the training of industrial manpower and not education, per se, the point is made here because education and training are intimately related.

Whereas efforts to develop human resources have been intensified they now seem to have reached a stage where some co-ordinated action is required. Many countries, conscious of this, have established authorities that concern themselves exclusively with training. Some have established ministries for human resources development, and these have succeeded to a certain extent in getting to grips with the problems involved and in conceiving, developing and putting through consistent policies for ensuring that training is adequate and carried out in a deliberate manner.

Industrial training is a wide, complex and highly diversified field which assumes different forms, including instruction at universities and specialized institutes; in-plant expert group meetings and seminars; and guided in-plant on-the-job training. The training may embrace several activities, including technical and managerial instruction and training in specialized branches of industry. It may also involve the further training of already qualified plant personnel such as engineers and managerial staff. On-the-job training could be greatly expanded and used as a means of providing continuous training and recycling labour, as could counterpart training (i.e. training by experts assigned to specific enterprises or institutions).

In other countries, however, many institutes concerned with human resources development operate under the aegis of different ministries and perform their tasks without the benefit of overall co-ordination or a clearly determined plan harmonizing national development objectives or priorities. In certain countries, plans for developing human resources for industry do not seem to be drawn up in an integrated manner on the basis of the needs of other related industrial sectors.

Enterprises, on the other hand are sometimes insufficiently aware of the fact that training should constitute an essential component of any industrial co-operation arrangement. Because they have been operating along traditional lines over a long period of time they may even tend to resist suggestions of this nature.

Training provided through commercial arrangements has become relatively extensive in a number of Islamic countries when compared to that provided through assistance. A large world market for training seems to be in the process of formation. This market is a highly imperfect one, due mainly to lack of information on training needs and capacities in the countries.

Thus, it is imperative that Islamic developing countries be in a position to define clearly their own short- and long-term training needs, to assess the capacity of the supplier to meet those needs, and to control the implementation of any training programmes acquired. The importance of considering training from the time a project is conceived, and of selecting a technology that can be assimilated and mastered, cannot be over-emphasized.

Technology and training should be subject of long-term planning to permit enterprises to secure technological continuity and to move progressively to higher levels of technological and managerial complexity. Steps should therefore be taken at the national level to see that those responsible for training are party to all matters concerning the acquisition of industrial technology and the related skills and know-how.

The vast array of employment and manpower problems that beset the developing economies, vary in so many ways from one country to another that they challenge the efficacy of generalized systems of manpower planning. In spite of the substantial improvements in analytical methodologies in the recent years, deficiencies in planning methods and large gaps in critically important data continue to exist. However, while it is difficult to forecast with any degree of accuracy future patterns in employment, it is safe to assume that continuing technological and socio-economic change will call for concomitant professional updating and retraining.

This will obviously lead to increasing demands for short courses for updating and retraining experienced industrial personnel. Particular training courses - the need for which may be identified by training institutions, government or industry itself - may include updating courses designed nationally for members in a specialized field (e.g. engineering or production management), or courses designed for a particular plant or a particular area of interest (e.g. micro computers for management).

Experience shows that many training institutions in Islamic countries are equipped with facilities which, if strengthened, could better meet identified training needs. Moreover, a number of research institutions in Islamic countries undertake research and innovation studies that make them suitable partners in designing and organizing training programmes for engineers and technicians in fields such as product and equipment design, industrial design, manufacturing processes, factory planning, etc. The programmes of these institutions related to technology development and spin-off for specific sectors would yield richer results if they were also oriented towards meeting industrial training needs.

The possibility of training going beyond the national framework (23 countries are located in Africa, 13 in Western Asia, 6 in Asia and the Far East and 1 in Europe) can be suitably exploited if institutions in Islamic countries take appropriate steps to see that other countries know of their existence. Many institutions are not well-known, subregionally or regionally. Many others do not realize that they may have a very useful role to play. Still others which have excess capacity do not realize that they can use this potential for the benefit of personnel from other islamic countries. Information on all the possibilities existing is published only on a limited scale and does not succeed in giving a detailed view of the resources available.

Although the co-operation among Islamic countries in the field of industrial training has intensified in recent years it still takes place in a rather unco-ordinated way and remains limited, it has not taken on the dimensions which are desirable or possible.

CO-OPERATIDON AMONG ISLAMIC COUNTRIES IN INDUSTRIAL MANPOWER TRAINING

The above review reveals that there are several advantages to co-operation among Islamic countries in the field of manpower training. Environmental conditions are more comparable, problems and obstacles confronting some of them have been overcome by others in a recent past and are still relatively fresh in mind and communications between trainers and trainees are simpler. These factors should enhance the learning process and facilitate transferability of what has been learned.

Perhaps the most important factor influencing co-operation in human resources development, is the recognition by the countries themselves of the need for greater self-reliance and a political will for mutual assistance. This implies overcoming attitudenal barriers and developing greater confidence in each others technical capabilities.

The single, most important difficulty to be dealt with in promoting co-operation is the absence of an information base. It is often not known what kinds of personnel will be needed or when - or what resources are available to meet the needs. This is true whether one speaks of the national, subregional or regional levels. Such information must be made available in reliable and usable form if efforts to develop and utilize better the existing manpower in a comprehensive manner are to be assured of success. Identification and estimation of requirements for qualified manpower present difficulties. Reliable estimates require not only improved statistics and other information, but also progress in forecasting demographic, economic, social and technological factors - all of which affect supply and demand with respect to manpower.

Moreover, there is a need for different mechanisms of co-operation to cover the training of various categories of personnel. What is necessary are analyses of Islamic countries' development plans and policies as well as their industrial structure and training capacity in relation to the specific types and levels of technological and managerial capabilities available and required by industry. Simultaneously, the capacity of other Islamic countries to help meet those specific needs would have to be surveyed. Such an approach to co-operation, involving simultaneous assessment of supply and demand - and a programme to fill the gap between these - would facilitate access to each other's facilities.

When envisaging programmes of co-operation it is necessary that the following very general points be examined and related to prevailing local conditions:

- Educational structures can vary among countries, and there is often no assurance that specified levels of education, when expressed in terms of years of schooling, represent the same degree of education or job preparation ;

- Methods of preparing for an occupation may differ from one country to another; even within a given country, there may be no single educational avenue to many occupations;

- Economic planning requires that national planners be aware of the technological and non-technological influences that condition occupational skill profiles at the project level;

- The proprietary nature of certain industrial information and know-how involved in industrial training and technology transfer sometimes prevents or restricts its transfer;

- The structure of industry may vary considerably from country to country as regards ownership, organization, management and decision-making;

- Developing countries and the industrial sectors within them vary enormously with respect to: stage of development; openness of the economy; nature and level of sophistication of market institutions; traditional as opposed to modern aspects of the industrial sector; relative importance of public and private sectors; strata of development (entrepreneurial, managerial, technical); and degree of labour absorption in the economy.

SUGGESTED MEASURES TO STRENGTHEN CO-OPERATION AMONG ISLAMIC COUNTRIES IN INDUSTRIAL MANPOWER TRAINING

As part of technical co-operation in the field of industrial training, the following programmes and activities are suggested for priority consideration:

PROMOTION OF PROGRAMMES OF CO-OPERATION FOR THE EXCHANGE OF EXPERIENCE AND SKILLS IN THE SHORT- AND LONG-TERM

The elaboration of programmes of co-operation will necessitate greater attention being given to national manpower development planning required for industry. Such planning which may be undertaken for the short-, medium- or long-term, will call for a systematic analysis of the prevailing labour market, including an assessment of current and anticipated shortages of skilled manpower and surpluses of unskilled manpower. It should also include:

a) An assessment of the country's level of economic and technological development and of its population's absorptive capacity;
b) An analysis of future technological trends and of their implications with regard to the training of industrial manpower on the basis of technological complexity analyses;
c) Short- and long-term programming of the development of training for industry in line with national, sectoral and enterprise needs.

The assessment should consist essentially of an inventory of existing manpower resources and requirements and a description of the existing balance between labour supply and demand. Although the quality of the assessment will depend on the availability of data, some information can usually be obtained showing the occupational and industrial characteristics of the labour force, the labour force participation rates and the amount of unemployment and underemployment. Subsequent steps involve the derivation of labour supply and demand estimates for the future. Estimates of supply by occupational class are generally based on an analysis of the output of formal training institutions and the amount of training taking place within industrial establishments. Following analysis of the labour supply-demand situation, a training policy to rectify projected imbalances between supplies and requirements is essential.

After the training needs or demands of the industrial sectors have been identified at the national level, and the existing facilities assessed to determine their willingness and capacity to supply the training needed, the government, on the basis of the correlation between demand and supply, will be in a better position to define its requirements employing a fairly flexible strategy. This approach calls for short- and medium-term programmes to be implemented in stages, the experience gained at each stage being used to improve and develop the next. Such an approach is essential if plans and programmes are to be drawn up on a subregional, regional or interregional level.

INSTITUTION BUILDING

In order to launch or strengthen programmes of co-operation among Islamic countries in the field of human resources for industry, it is a prerequisite, as indicated above, that assessments of training needs be carried out, associating enterprises, where appropriate, and taking fully into account the structure and pattern of industry, the technologies used and their level of complexity, and the training capacity available.

Such assessments should be made at national, regional and interregional levels (a) of quantitative and qualitative training needs in the various sectors of industry; (b) of existing and planned national training institutions; and (c) of training opportunities offered.

It will also be necessary to standardize the definition of the training needs and capabilities identified, as well as of the various categories of technical and managerial personnel required by the various industrial branches. This classification could provide a basis on which the parties concerned could proceed to develop their co-operation.

However, any assessment of training capacity must be based on agreement between assessors and assessees as to the criteria, procedures and methods to be used. The assessment could cover:

a) The objectives, training methods employed, and general organization of the institutions concerned;
b) The standards, capabilities and complementarity of these institutions, with reference to the contribution they make - or could make - in different areas of training, and their potential development as "centres of excellence";
c) The technical or other assistance necessary to strengthen their training capacity.

"Centres of excellence" are defined as technical co-operation instruments whose objective is, inter alia, to contribute to the development of other developing countries through technical training in fields related to industrial development. By using these centres, the transfer of technology can be re-evaluated, special importance being attached to research and development in the relevant areas of scientific interest in a regional, and to the utilization of the knowledge thus gained in the production of goods and services in the economies of ther developing countries.

A major effort must therefore be made to identify industrial institutions in Islamic countries that can become "centres of excellence" serving not only their own country, but other developing countries as well. Such institutions could include industrial training centres, research and development institutes and universities which have achieved a certain level of competence but which, with additional investment or other assistance, could achieve recognized standards of competence in their particular fields. This assistance could take the form of developing the training function, upgrading the training capabilities, strengthening human and physical resources, supplementing and reinforcing existing programmes, or establishing "twinning" or other relationships with complementary institutions in other regions. The same applies to those institutions in developing countries established to provide specific services to industry. These institutions - which include standards institutes, quality certification authorities, industrial information centres, extension services for small-scale industries as well as specialized institutions for specific sectors of industry - are established after the need for their services has been determined at the national level.

While many of the institutions discussed above are not established with the primary objective of performing a training function, experience has shown that after an institution has acquired the technical capacity to perform its duties, there are advantages to expanding its activities to include training. The introduction of training activities means, on the one hand, the institution's becoming more aware of the actual needs of industry, and, on the other, its being in a better position to render services to industry.

This programme would offer the advantage of reducing national training costs and afford the possibility of training more personnel. In most instances, it costs less and is more effective to add relevant training capabilities to an existing capacity than to develop technical know-how and experience in a separate training institution. In addition, it would encourage the establishment of a network arrangement not only for the exchange of information as to industrial training needs and resources, but also for facilitating the actual exchange or placement of trainees - in some cases through an inter-institutional link.

The search for "centres of excellence" faces, ab initio, the problem that a number of such institutions in the developing countries are relatively young, and, evidently, one of the parameters for achieving excellence is tradition and experience. In some instances, however, institutions in developing countries may have an advantage over those in industrdialized countries, given their exposure to local situtions. Nevertheless, it must be borne in mind that as there may be a high concentration of educational and training capabilities in some countries, followed at a distance by other countries, the institutions finally selected for "centres of excellence" may be found to be at different levels of excellence in this respect.

Thus, certain institutions in developing countries could become not only "centres of excellence" for technological development and spin-off for specific sectors, but also "centres of excellence" for industrial training and skills in those sectors.

Central to the above discussion is the question of the standards to be established for the recognition of institutions as "centres of excellence". These standards must be clearly determined, having regard to the potential utilization of institutions so recognized in furthering industrial development at the national level and in other developing countries. Following the identification of the appropriate institutions, organizational, financial and technical support measures will have to be envisaged and complemented by a wide range of informational and promotional activities among developing countries.

INFORMATION SYSTEM

In view of the difficulties experienced in the collection of the required information to foster an Islamic co-operation in the field of human resources development for industry consideration should be given to establishing or strengthening existing activities to develop an integrated information system to provide, on a continuous basis, timely and relevant information on industrial training needs and on training opportunities in Islamic countries.

Such a system will facilitate the formulation and implementation of national policy of training and plans for developing human resources for industry. It will serve to identify the requirements for manpower in the field of research and technological development in the assessment of industrial training needs. It will facilitate the organization of adequate training activities and the setting up of programmes, curricula, the selection of training methods and techniques, development of training materials and systems, in relation to specific types and levels of training for managerial and technical personnel, required by the industry.

The information exchange will contribute to the identification of the capacities and capabilities of training institutions and indicate the possibilities of their strengthening. It will enhance co-operation among training institutions of Islamic countries on sub-regional, regional and also interregional levels, contributing in this manner to the improvement of industrial training on a global basis.

The implementation of such a project will permit Islamic countries to identify, promote and organize programmes in a number of specialized areas.

In this connection the UNIDO IV Resolution, inter alia, called on developing countries and on UNIDO to have a forward-looking industrial manpower policy as one of the main instruments of a dynamic and self-sustaining industrial development objective, as well as to compass occupational and professional activites such as managerial, supervisory, entrepreneurial (public or private) engineering, technological and scientifc capabilities. It also requested that mechanisms be evolved including that information channels between developing countries be established.

The information system advocated will facilitate the role of the governments in preparing and implementing strategy, policy and systems for industrial manpower training. Such an information base will assist Islamic countries to establish national mechanisms geared to co-ordinate the collection and flow of relevant information and its analysis, providing thus a basis of effective co-ordination of training activities at the national level.

The exchange of information on training capacities and capabilities will foster a co-operation among Islamic countries in the field of human resources development for industry in general and industrial training, in particular.

TRAINING METHODS AND TECHNIQUES

Special attention should be given to evolving techniques of training to take advantage of the growing variety of training aids available. Electronic aids in particular are increasingly used in countries short of qualified teachers but which have established training institutions. Application of these aids need, however, to be carefully examined on the basis of experience.

The new aids and new training techniques must also be applied in designing national and regional training activities, and for this a number of sector-specific training programmes should be designed. These could then be made available to Islamic countries for training trainers and designing and developing curricula.

Such a programme should also seek to develop materials, equipment and techniques that can be distributed and/or reach a much larger audience than was possible hitherto. Special attention in this context should be given to audio-visual aids, motion pictures, video cassettes and training packages.

INDUSTRIAL FINANCING

It is also important to give special attention to industrial financing. The new set of international economic relationships that are needed to promote economic and, above all, industrial development make that financial institutions have an important catalytic role to play in the promotion and financing of small and medium scale enterprises and lead to an increased number of industrial projects and through that the development of indigenous technological capabilities.

Development finance institutions located in Islamic countries are or could be considered as local partners for Islamic banks.

The upgrading of skills through training in selected and specific areas appears to be crucial to unblock the situation and channel much needed risk capital into the economies of Islamic countries and LDCs with moslem minorities.

It must be appreciated that the economies of Islamic countries are heterogenous and that their levels of development differ substantially from sub-region and country. These include countries with extremely high as well as low per capita income.

Today there are about 40 Islamic banks operational. They operate under profit and loss sharing schemes and have excess liquidity.

To allow them to assume an important and catalytic role in project financing and reduce the problems they are confronted with when engaging in equity participation and other risk sharing schemes it is important to develop a capacity to generate good investment opportunities in Islamic countries and to identify clients and entrepreneurs to implement and manage projects successfully.

Against this background, Islamic banks may wish to give particular attention to:

a) Identifying the training needs of small and medium scale enterprises and the general problems connected with industrial financing;

b) Developing a programme to strengthen their institutional development by providing training opportunities to their professional staff catering to the needs of specific target groups chief executives, senior managers, operational managers and officers, new recruits and client development to:

- Appraise projects including small and medium-scale industries;
- Process a larger volume of industrial projects due to enhanced professional ability;
- Evaluate opportunities to utilize local natural resources;
- Handle project promotion and identification, supervision and follow-up of industrial projects.

The programme needs also to identify a set of institutions willing and able to provide training not only at the national level but also at the regional and subregional levels. Strengthening the capacities and capabilities of such institutions should become an essential part of the programme.

OTHER ACTION-ORIENTED MEASURES

The following paragraphs discuss specific areas where action-oriented measures could be taken at national, regional and interregional levels.

Establishing a machinery to facilitate placements. It is important that countries willing to participate in training programmes organized by other Islamic countries ascertain whether their existing machineries for the administration and co-ordination of fellowship programme activities is adequate to assume such responsibilities. Where such a machinery does not exist, assistance may have to be considered under a programme for co-operation among the Islamic countries or through United Nations organizations such as UNIDO. The proposed assistance could include such services as consultancy or training of fellowship administration staff. Countries should therefore review their machineries for the administration and co-ordination of fellowship programme activities and, as appropriate, earmark funds in the national budgets to finance stipends and other related costs for either nationals sent for training to another developing country, or fellows invited from other developing countries.

Establishing scholarships. Governments should examine their policies in the field of education, scientific and technological research and development to see whether they provide for establishing block grants to be placed at the disposal of suitable institutions for stipends to qualified personnel from abroad. Such block grants should be related to activities such as special university courses or internships in the framework of priority research areas. Since such block grants by their very nature are in a certain sense what can be called "offer-oriented", co-ordination mechanisms between the developing countries will be needed to make sure that such offers correspond, as much as possible, to identified demands.

Consolidating and integrating mechanism. In line with the measures discussed above, and in order to ensure that the best use is made of all available resources, consideration could be given to establishing a consoilidating and integrating mechanism at subregional, regional and - to a certain extent - interregional levels for fellowship programmes in the field of industrial manpower training.

Organizing courses, seminars and other training facilities. In the framework of systems of continuous education (or, in other words, of life-long training) efforts should be made to ensure effective co-operation at national, subregional, regional, and interregional levels so as to yield maximum benefit with regard to the strengthening of technical and managerial capacities in Islamic countries. Pertinent activities should aim, inter alia, at updating technological know-how, upgrading technical or managerial competence, deepening practical experience, widening the individual horizon through interdisciplinary approaches, and analyzing, on a continuous basis, existing socio-cultural conditions with regard to the application and absorption of appropriate technologies.

Instruments in this context could be pertinent education and training institutions including industry-owned or -related training centres, research institutions, institutes in the framework of adult education, well co-ordinated roving seminars or mobile training units. Existing regional or subregional institutions should play a predominant role to promote and co-ordinate such activities within their respective field of interest. A special part could be played in this regard by non-governmental organizations, national associations or regional federations.

PROGRAMME WITHIN THE FRAMEWORK OF ASSISTANCE OF THE RELEVANT BODIES OF THE UN

The development of the manpower required for rapid industrialization, in addition to any measures taken by the Islamic countries themselves, requires a concerted approach on the part of all the international organizations concerned. Within the context of the proposed programmes UNIDO, subject to the availability of funds, could extend assistance to interested countries, if so requested. Examples of assistance given to Islamic countries include:

Centres of Excellence

UNIDO training activities directed towards strengthening developing country training includes strengthening existing institutes, training of trainers, promotion of linkages between training institutions and industry, promoting institutions as "centres of excellence" and collection and dissemination of information on training.

Present UNIDO training activities in the area of building up Islamic country institutions as training centres is currently embodied in its "centres of excellence" programme. The basis is the recommendation in the New Delhi Declaration that UNIDO promote greater use of the training capabilities of institutions in developing countries in the execution of their training programmes. Under the centres of excellence programme, UNIDO has identified and is gradually strengthening training institutions in Islamic countries promoting industrial training programmes in these institutions. A network system of such institutions is being built to foster a co-operation among them.

The immediate objectives of the activity are to:

a) Identify institutions in Islamic countries that have the potential to become "centres of excellence";
b) Assess institutions' capabilities to provide training to industrial and management personnel from other developing countries;
c) Identify technical assistance necessary to improve an institution's capability to this end;
d) Propose the ways and means to envisage short,medium and long-term programmes of co-operation between these institutions and other training institutions in developing countries;
e) Propose plans for government co-operation arrangements.

A list of the institutions in Islamic countries which have indicated their willingness to take part in the programme is attached as Annex I.

In this connection, it is noted that UNIDO has undertaken a survey in a selected number of countries to identify institutions which would, as "centres of excellence", be able and willing to promote, organize and co-sponsor training on national, regional and interregional levels for technicdal and managerial personnel. The Organization's experience along these lines has shown that the institutions surveyed have a great potential to acquire the capacity to provide assistance in the field of technical and managerial training.

This activity which is oriented towards developing an industrial training network which would encourage developing countries to provide technical assistance to other developing countries, includes:

- Preparing a listing of appropriate institutions, with a summary of their activities, as the basis for a guide or directory which can be placed at the disposal of developing countries;
- Assessing the standards and capabilities of these institutions, with particular reference ot the contributions they make, or could make, in the fields of training or consultancy;
- Identifying support and technical co-operation which the institutions require;
- Formulating specific project proposals for each institution aimed at strengthening its training or consultancy capability;
- Identifying the institutions' possibilities for sub-contracting projects and programmes.

Industry University Linkage

In addition, under its industry/university linkage programmes, universities are co-opted as suitable partners for UNIDO in industrial training at the national or regional levels.

The co-operation with universities include:

a) Co-operation in industrial training;
b) Adjusting university education and research;
c) Development of inter-university co-operation in training for industrial development.

An example is the assistance provided by UNIDO in organizing and financing of a training operation between the University of Douala (United Republic of Cameroon) and the University of Louvain (Belgium) in the area of industrial management.

Financing

In the field of industrial financing UNIDO was called upon by the Association of Development Finance Institutes in Asia and the Pacific (ADFIAP) and the Association of African Development Finance Institutes (AADFI) to assist them in their plans for training programmes for their member institutions and for research on member's training needs in order to overcome the weakness of the Development Finance Institutions in their relations with small and medium scale industry insofar as they sometimes reflect inexperienced management, inadequate bank procedures and practices.

The programmes developed in the pursuit of the above objectives have been geared at creating a system which will enable Development Finance Institutions to monitor and improve their operational performance through training and institution building.

The main problems identified refer to the difficulties the banks face in identifying enough outlets to finance projects profitably and purposefully and the criticism of entrepreneurs with regard to the inflexibility the banks show in studying their requests for loans.

ISSUES FOR DISCUSSION

With a view to carrying further the recommendations of the Islamic Conference as regards co-operation among Islamic countries in the field of industrial manpower training, the following should be given special attention:

OBJECTIVES AND STRATEGIES

Governments of Islamic countries may wish to consider establishing objectives that are appropriate to their own specific conditions and policies by:

Short-term

a) Formulating industrial training targets at the national and sectoral levels, as well as manpower development programmes to meet these targets (including industrial enterprise training targets and schemes);
b) Providing a mechanism to facilitate the organization of training courses by enterprises;
c) Formulating measures for the implementation of the national manpower development programme;
d) Negotiating and agreeing with other governments on mutual recognition of education certificates and training standards.

Long-term

e) Co-ordinating, monitoring and evaluating implementation;
f) Providing a mechanism for defining and facilitating the role of industrial enterprises in training, including a link designed to ensure co-operation between industrial enterprises and educational and training institutions in all phases of industrial education and training;
g) Organizing information on the existing training capacity in developing countries which would meet the demand from other developing countries;
h) Defining long-term training needs and programming the acquisition and development of technology and related skills;
i) Examining the desirability of long-term arrangements designed to meet technological and training needs, including the financial and other implications of such arrangements;
j) Improving the scope and content of contractual relations at the enterprise level for training and the acquisition of industrial skills.

ESTABLISHMENT OF A CENTRAL AUTHORITY FOR INDUSTRIAL TRAINING

Governments may also wish to examine the need to designate responsibility to some form of central national authority for the direction and co-ordination of activities related to the implementation of the above-mentioned objectives and strategies. Where such an authority does not already exist, the functions could be assigned to an already established institution with any additional mandate as may be decided upon.

AGREEMENTS TO FOSTER PROGRAMMES OF CO-OPERATION AMONG ISLAMIC COUNTRIES

Intergovernmental industrial co-operation arrangements or agreements in the field of manpower development for industry could provide the basis for the establishment of joint programmes in fields of common interest and, where appropriate, for the harmonization of activities. These arrangements or agreements - which could be bilateral or multilateral and operate at the subregional, regional or interregional levels - could also become a valuable vehicle for developing better conditions for industrial co-operation. They could cover, for example:

a) The setting up of joint working groups in various sectors of industry;
b) The exchange and co-ordination of information on the short, intermediate and long-term training needs of - and training capacities available in - each country or region, on the basis of national short- and long-term programmes for industrial manpower development;
c) The establishment of programmes of co-operation in training for specific sectors of industry or categories of personnel;
d) The promotion of a network of institutions for industrial training, and the fostering of co-operation among these institutions over the short and long term;
e) The establishment or development of training schemes.

To be successful, such arrangements and agreements require clear consensus with regard to the role of government, training institutions, industry, and the academic community. They should also be so designed as to encourage the participation of public and private enterprises and industrial organizations - including chambers of commerce and industry - of the partner countries. They should also encourage the use (and the creation, where they do not exist) of "centres of excellence" in fostering industrial development.

The above mentioned "Central Authority" could be called upon to hold consultations with a view to establishing a framework for concluding agreements among Islamic countries through appropriate mechanisms, or through the United Nations machinery. In addition, they could take immediate steps to promote and establish a network of institutes and foster their co-operation in training and exchange of information and experience through international institutional linkages.

ESTABLISHMENT OF A STANDING COMMITTEE

The ministerial meeting of the OIC may also wish to establish a Standing Committee composed of representatives of selected countries to monitor progress made in the implementation of the programme, to facilitate contacts with regional and international organizations, and to solicit their co-operation and support. The Standing Committee could also act as a preparatory committee for future meetings of the Islamic Conference, co-operation among Islamic countries in the field of industrial manpower training.

Training Branch
September 1984

LIST OF ISLAMIC FINANCIAL INSTITUTIONS

By Location

A. ARAB COUNTRIES

Name of Institution	Year of Establishment	Total Assets ($ Mill.) Authorized Capital
Nasser Social Bank, Cairo	1971	Capital(1981): 28
Islamic Development Bank, Jeddah	1975	Subscribed : 1937
Dubai Islamic Bank, Diera	1975	Capital(1982): 13.6
Faisal Islamic Bank of Egypt, Cairo	1977	Paid in(1982): 29.6
Faisal Islamic Bank of Sudan, Khartoum	1977	Paid in(1982): 14.8
Kuwait Finance House, Safat, Kuwait	1977	Capital(1982): 51.8
Islamic Investment Company of the Gulf, Sharjah, UAE	1978	Capital(1978): 0.8
Jordan Islamic Bank for Finance and Ivestment, Amman	1978	Capital(1982): 12 Total assets : 129
Bahrain Islamic Bank, Manama	1979	Capital(1982): 15.3
Islamic International Bank for Investment and Development, Cairo	1980	Capital(1982): 6.4 Total assets: 34.2
Bahrain Islamic Investment Company, Manama	1980	Capital(1980): 13
Islamic Investment House, Amman	1981	n.a.
Islamic Investment House Shareholding Company Ltd., Amman	1981	Capital(1981): 12
Massraf Faysal Al-Islami of Bahrain, Manama	1982	Capital(1982): 20
Al-Baraka Group, Jeddah	1982	Capital : + 500
Al-Baraka Investment and Development Company, Jeddah	1982	Capital : 57
Sudanese Islamic Bank, Khartoum	1983	Capital(1983): 20
Islamic Co-operative Development Bank, Sudan	1983	Capital(1983): 3.5
Islamic Bank of Quatar, Doha	1983	n.a.
Saudi-Tunisian Finance House, Tunis	1984	Capital(1984): 50 Paid in: 12.5
Al-Baraka Islamic Investment Bank, Bahrain	1984	Capital(1984): 200 Paid in: 50
Al-Baraka Bank, Sudan	1984	Capital(1984): 200 Paid in: 50

B. OTHER MUSLIM COUNTRIES

Name of Institution	Year of Establishment	Total Assets ($ Mill.) Authorized Capital
Iran-Islamic Bank, Teheran	1979	n.a.
Bank Islam Malyasia, Kuala Lumpur	1982	Capital : 215 Paid in(1982): 42
Islamic Bank of Kibris, Cyprus	1982	Capital 1982: 5
Islamic Bank Bangladesh Ltd., Dacca	1983	Capital : 30 Paid in(1983): 10
Al-Baraka Bank, Turkey	1984	Capital(1984) 200 Paid in : 50
ISLAMISATION OF THE ENTIRE BANKING SYSTEM		
1. Pakistan	Started in 1979	
2. Iran	Started in 1983(?)	
C. OTHER DEVELOPING COUNTRIES AND OFFSHORE BANKING CENTRES		
Philippine Amanah Bank, Zambuanga City	1973	Capital : 12 Paid in : 6
Falah Investment Company Ltd., Bombay	1983	
Ittefaq Investment Ltd., Bombay	1983	
Islamic Investment Company, Bahamas	1977	Capital : 2
Shari'a Investment Services S.A., Bahamas/Geneva	1980	
Dar Al-Maal Al-Islami Trust, Bahamas/Geneva	1981	Capital : 1000 Paid in : 310
African-Arab Islamic Bank, Bahamas	1981	
Islamic Financial Holding Ltd., Bahamas	1982	

D. INDUSTRIALIZED COUNTRIES

Name of Institution	Year of Establishment	Total Assets ($ Mill.) Authorized Capital
First Muslim Interest Free Business Institution, Johannesburg	1976	n.a.
Holding Islamic Banking Systems, Luxembourg	1978	Capital(1978): 10
Shari'a Investment Services S.A., Geneva	1980	
Al-Rajhi Company for Islamic Investments, London	1981	Capital(1981) : 0.2
Islamic Finance House Public Company, London	1981	Capital(1981) : 95 Paid in: 0.5
First Interest Free Finance Consortium, London	1982	Capital : 15.000
Islamic Investment Company of the UK London	1982	Capital(1982) : 0.4
Islamic Investment Company Melbourne	1982	n.a.
Massraf Faysal Al-Islami of the UK London	1982	Capital(1982) : 0.7
Islamic Bank International of Denmark, Copenhagen	1983	Capital(1983) : 3
Al-Baraka Investment Company, Isle of Man, U.K.	1983	Paid in (1983): 14

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
ALG	L'Institut Algerien du Petrol (IAP) Boumerdes, Algiers	F A	2.4 1.3	Oil, gas and petrochemical industries
ALG	L'Institut National de la Productivite et du Dev. Industriel Boumerdes Algiers	F A	3.3	Industrial organization and management
ALG	La Federation Arabe de Fer et de L'Acier B.P. 4, Route de Cheraga Algiers	E F A	1.1	Iron and steel production industry
ALG	L'Institut Algerien de Normalisation et de Priorete Industr. 5 rue Abou Hama Moussa Algiers	F A	2.3	Quality control, standardization and industrial property
ALG	Le Centre de Formation aux Techniques de Mantention 7 rue Douamont-Delmonte Oran	F A	2.1	Handling and transport in mechanical and metallurgical industries
ALG	Le Centre de Formation pour la Siderurgie 34 Bd Boualisaid Annaba	F A	1.1	Mechanics and Metallurgy
ALG	Le Centre de Formation pour la Siderurgie B.P. 44 El Hadjar Annaba	F A	1.1	Technical, mechanical and metallurgical industry
ALG	Le Centre Inter-Unites de Techniciens et Agents de Maitrise 34 Bd. Boualisaid Annaba	F A	1.1	Mechanical and metallurgical industry

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
BGD	Bangladesh Development Centre Mirpur Road 4-5 Sobhanbag Dacca 7	..	..	.....
BGD	Bangladesh Management Development Center Mir Phur Rel 4-5 Sobhanbag, Dacca 7	E	3.3	Senior and middle level management

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
BEN	Le Centre de Formation Administrative et de Perfectionnement B.P. 990 Cotonou	F	3.3	Management and planning

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
CAM	L'Ecole Nationale Superieure Polytechnique de Yaounde B.P. 728 Yaounde	E F	1.2	Electro-mechanics, electronics and engineering
CAM	L'Ecole Superieure de Sciences Economiques et Commerciales de Douala B.P. 1937 Douala	E F	3.5 3.4 3.3	Economics, trade and accounting, management
CAM	L'Association pour la Formation des Cadres et de l'Admin. B.P. 4012 Yaounde	E F	3.3	Management
CAM	Institut d'Administration des Entreprises Universite de Yaounde B.P. 337 Yaounde	..	..	.....
CAM	Ecole Normale Superieure d'Enseignement Technique B.P. 1872 Douala	..	..	.....

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
EGY	Electronic Industries Research and Development Center P.O.Box 773 Dar el Salam Cairo	E A	2.7	Research and development, ind. services
EGY	Instructor Training Institute Productivity and Vocational Training Department of the Ministry 3 Ismael Aboul Foutouh Street Dokky, Cairo	E A	3.1	Vocational instructing techniques
EGY	The Central Metallurgical Research and Development Center National Reserch Center Dokki, Cairo	E A	1.1	Metallurgy
EGY	Tabbin Institut for Metallurgical Studies P.O.B. 862 Tabbin, Cairo	E A	1.1	Metallurgy
EGY	Engineering and Industrial Design Development Center ..... Cairo	E A	1.2	Electronic equipment
EGY	Electronic Industries Research and Development Center P.O.Box 773 Cairo	E A	1.2	Electronics
EGY	EI+S Management of Preventive Maintenance Project El Tabbin - Helwan P.O.Box 796 Cairo	A	3.3	Management service to heavy industry
EGY	Egyptian Iron and Steel Company 54 Abd El Khalek Sarwat St.	E A	1.1	Iron and steel

	Cairo			
EGY	Plastic Development Center ..... Alexandria	A	1.3	Plastic goods
EGY	Textile Consolidation Fund Camila Buhreid St. El-Slouf Alexandria	E A	1.8	Spinning, weaving, knitting
EGY	Institute of Management and Industrial Relations ..... Cairo	...	...	.....
EGY	National Research Centre Sh. El Tahrir Dokki, Cairo	..	..	.....

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
GAB	L'Institut de l'Economie et des Finances B.P. 3913 Libreville	F	3.3 3.4	Finance, economy and management
GAB	L'Ecole de Techniciens des Travaux Publics ..... Fougamou	F	2.8	Motor truck maintenance and repair
GAB	Institut National des Sciences de Gestion Universite Nationale du Gabon B.P. 13131 Liberville	..	..	.....
GAB	Le Centre de Formation et de Perfectionnement Professionel P.O.Box 860 Liberville	F	3.1	Workers training

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
GUI	Centre National de Productivite B.P. 881 Conacry	..	..	.....

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
INS	Metal Industries Development Centre Balai Besar Pengem Bangan Industri Logam Dan Mesin Jalan Sangkuriang 1 P.O.Box 113 Bandung	E	1.1	Metal
INS	Cellulose Research Institute Jalan Raya Dayeuhkolot 158 Bandung	INDO	1.3	Cellulose
INS	Ministry of Education and Culture Polytechnics Institutes of Indonesia Directorate of Technical and Vocational Education Jalan Hanglokir 11/16, Kebayoran Baru Jakarta Selatan	E	1.2	Mechanical and electrical engineering
INS	Oil and Gas Training Center-Akamigas Jalan Sorogo, Cepu, Central Java	E INDO	2.4	Oil and gas
INS	Management Training and Productivity Centre Jalan Gatot Subroto 170 Bandung	INDO	1.8	Management in small-scale industry
INS	Institute for Research and Development of Ceramic Industries Jalan Jend A. Yani 392 Bandung	E	1.3	Ceramics
INS	Institute for Research and Development of Engineering and Industrial Materials Jalan Sang Kuriang 14 P.O.Box 32 Bandung	E	2.3	Quality control and testing

INS	Institute for Management Training and Development Jalan Mentung Raya No. 9 P.O.Box 3227 Jakarta Pusat	E INDO	3.3	Management training, consultancy and publication
INS	Institute for Research and Development of Agri-Based Industries Jalan Ir.H. Juanda No. 9 Bogor	INDO	1.7	Agri-based industries
INS	Institute for Research and Development of Textile Industries Balai Besar Exnoliji Tekstil Jalan Jand.A. Yani 390 Bandung	E	1.6	Textiles
INS	Directorate of Building Research Direktorat Penyelidikan masalah Banguan Jalan Jamansari 84 Bandung	INDO	2.6	Building Materials
INS	Metal Industries Development Centre Balai Besan Pengembangan Industri Logam dan Mesin, Jalan Sang Kuriang 12 P.O.Box 113 Bandung	E INDO	1.2	Machine equipment and tools
INS	Management Institute Faculty of Economics University of Indonesia Jakarta	..	..	.....

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
JOR	The Royal Scientific Society Jordan University B.P. 6945 Amman	E A	3.1	Industrial technology
JOR	The Jordan Institute of Management Industrial Development Bank Building Avenue de la Chambre de la Nation P.O.Box 2991 Amman	E A	3.3	Industrial management studies and skills
JOR	Arab Organization of Administrative Sciences Dahiat el Hussein P.O.Box 17159 Amman	..	..	.....

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
KUW	The Arab Planning Institute B.P. 5834 Safat	E	2.7	Economic and social planning
KUW	Training Centre of the Kuwait Institute for Scientific Research B.P. 24885 Safat	E A	3.1 3.3	Industrial technology and management
KUW	Kuwait Institute for Scientific Research P.O.Box 24885 Safat	..	..	.....

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
MAL	University of Technology Malaysia Kuala Lumpur	BAH	1.2	Engineering
MAL	National Institute of Public Administration Petaling Jay	E BAH	3.3	Public administration
MAL	Palm Oil Research Institute of Malaysia	E BAH	1.7	Palm oil
MAL	Malaysian Institute of Management Jalan Ampang	E BAH	3.3	Management
MAL	National Productivity Center Petaling Jaya	BAH	3.3	Management, productivity
MAL	Rubber Research Institute of Malaysia	BAH	1.3	Rubber
MAL	Asia and Pacific Development Centre	E BAH	..	Industrial development
MAL	Standard and Industrial Research Institute of Malaysia Shah Alan, Selangor	E BAH	2.3	Quality Control and testing

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
MAU	Ecole Nationale d'Administration B.P. 252 Nonachot, Mauritania	..	..	.....

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
MLI	L'Ecole Nationale d'Ingenieurs B.P. 119 Bamako	F	1.2	Applied sciences in Engineering
MLI	L'Ecole Nationale d'Administration B.P. 276 Bamako	F	3.3 3.5	Public administration and economic sciences
MLI	L'Institut de Productivite et de Gestion Previsionelle Avenue Mohammad V B.P. 300 Bamako	F	3.1	Training superior skills in industry, trade, transport and construction
MLI	Centre de Formation Professionelle B.P. 63 Bamako	..	..	.....

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
MOR	Institut Superieure de Commerce et d'Administration des Entreprises Km 9,5 Route de Nouasseur Casablanca	F A	3.3	Management training
MOR	Le Centre de la Raffinerie de la Samier B.P. 89 Mohammedia	F A	2.4	Oil refinery operation
MOR	Centre de l'Office National de Chemin de Fer 6 bis rue Aberahman El Chafiki Rabat-Agdal	F A	2.1	Railroad and railway industry
MOR	Le Centre National de Documentation B.P. 826 Rabat	F A	..	Industrial information
MOR	L'Institut Maroccain d'Emballage et du Conditionement Km 9,5 route de Nouaceur B.P. 8006 Casablanca	F A	2.1	Industrial packaging
MOR	L'Ecole Mohammadia d'Ingenieurs B.P. 765 Rabat Agdal	F A	1.2	Engineering
MOR	Ecole Nationale d'Administration 1 Avenue de la Victoire B.P. 165 Rabat	..	..	.....

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
NIR	Federal Institute of Industrial Research Oshodi	..	..	.....
NIR	Industrial Training Fund	..	..	.....
NIR	Leather Research Institute of Nigeria ..... Zaria	E	2.7	Research Training extension
NIR	Ecole Nationale d'Administration B.P. 542 Naimey	..	..	.....

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
PAK	National Fertilizer Corp. (Pakab Training Center) Alfalah Bldg, 1st floor P.O.Box 1730 Shahrah-e-Quaide-Azam	E URDU	1.3	Fertilizer
PAK	State Cement Corporation of Pakistan PEC Bldg 97/A-b/D Gulberg III Lahore	E URDU	2.6	Industry cement
PAK	Leather Products Development Centre:LFDC Raza Apartment IV-D 14/7 Nazimabad Karachi	E URDU	1.7	Industry Leather
PAK	Federal Chamical and Ceramics Corp./ Ravi Rayon Ravi Engineering Ltd. PNSC Bldg. 15th Floor, Moulvi Tamizuddin Khan Road Karachi	E URDU	1.2	Engineering-Chemical
PAK	Investment Advisory Centre of Pakistan Ground floor, State Life Bldg. Dr. Ziauddin Ahmad Rd. //P.O. Box 7534 Karachi	E URDU	1.2	Engineering
PAK	Pak Swiss Training Centre Campus PCSIR Laboratories, Karchi 39	E URDU	3.1	Technology
PAK	Pakistan Engineering Company 6 Ganga Ram Trust Bldg. Shahra-e-Quaid-Azam Lahore	E URDU	1.2	Engineering
PAK	Heavy Mechanical Complex Taxila Rawalpindi	E URDU	3.1	Technology

PAK	Pakistan Machine Tool Factory Training Institute Lankhi Karachi 34	E URDU	3.1	Production/Training
PAK	Textile Industry Research and Development Centre P.O. Box 479 Mouli Tamizuddin Road Karach	URDU	1.6	Training, Research and consultancy textile
PAK	Pakistan Steel Mills Corporation Ltd. Bin Quasim, Karachi 50, P.O. Box 5429 Karachi	E URDU	1.1	Metal Industry
PAK	PERAC State Petroleum Refining and Petrochemical Corporation, Ltd. 4th Floor, Karim Chambers, Merewether Rd. Box 8913 Karachi	URDU	3.1	Industrial Refining and Industrial Training
PAK	Institute of Cost and Management Accountants House Shah Shaheed Road, Soldier Bazaar P.O. Box 7284 Karachi 3	E URDU	2.7 3.3	Management Training, Research & Development
PAK	Packages Ltd. Sharah-e-Roomi, Head office and works Lahore	E URDU	2.1	Industrial Packaging
PAK	Metals Advisory Service 125A Industrial Area, Kot Lakhpat Lahore 37	E URDU	2.7	Industry/Consultancy-Metal
PAK	Pakistan Industrial Technical Assistance Centre (Ministry of Industries Maulana Jalal-ul-Din Rommi Road Lahore 16	E URDU	3.1	Industry-Training and Production
PAK	Pakistan Institute of Management Sharah Iran 6 Karachi	..	..	.....
PAK	Pakistan Administrative Staff College Sharah-e-quaid-e-Azam Lahore	E URDU	3.3	Management-Development

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
SEN	L'Ecole Superieur de Gestion des Entreprises 72 avenue de la Republique B.P. 3802 Dakar	F	3.3	Management for administration and enterprise
SEN	L'Institut de Technologie Alimentaire Rue des Peres Maristes Han, Dakar	F	1.7	Food industry
SEN	La Societe Nationale d'Etudes et de Promotion Industrielle 4 rue Maunory B.P. 1100 Dakar	F	3.3 3.5	Economic studies and management training
SEN	Ecole Nationale Superieure Universitaire de Technologie B.P. 5085 Dakar	F	3.3	Training in production and management
SEN	Ecole Nationale Superieure de L'Enseignement Technique et Professionel Route de Ouakam Dakar	F	3.8	Training of trainers
SEN	Institut Africain de Developpement Economique et de Planification rue du 18 Juin B.P. 3186 Dakar	E F	2.7	Economic and social planning
SEN	Ecole Polytechnique de Thies B.P. 10 Thies	F	2.4	Energy and industrial maintenance

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
SOM	Somalia Institute for Development, Administration and Management P.O.Box 964 Mogadiscio	E	01	Training and consultancy to industry

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
SUD	Management Development Centre P.O.Box 2308 Khartoum	E	3.3	Training, consultation and research in management

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
SYR	L'Institut de Statistiques rue Salhie Damascus	A	3.3	Statistics
SYR	L'Institut de Planification Mezza-West Damascus	A	2.7	Economic and social planning
SYR	The Management Developmentand Productivity Centre Ahmed Mowaffac Ave B.P. 5244 Damascus (Mohajrine)	A	3.3	Management, marketing and productivity

CENTERS OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	ACTIVITY CODE	SPECIALIZATION
TUN	Le Centre d'Etudes Industrielles 2 Cite El Mahrajene El-Menza B.P. 5 Le Belvedere Tunis	F A	2.7	Industrial studies and planning
TUN	Le Centre National du Cuir et de la Chaussure 6 rue Jebel Mansour Tunis	F A	1.6	Leather draftsmanship and shoes
TUN	L'Institut National de Normalisation et de la Propriete Ind. 2 Cite el Mahrajene El Menza B.P. 5 Le Belvedere Tunis	F A	2.2 2.3	Quality control, standardization and industrial property protection
TUN	L'Institut Superieure de Gestion 45 avenue de la Liberte Cite Bouchouda Le Bardo, Tunis	F A	3.3	Management and productivity

CENTRES OF EXCELLENCE

COUNTRY	INSTITUTE	LANGUAGE	SPECIALIZATION
TUR	Turkish Agricultural Supply Authority Ankara Turkey	E	Agriculatural Machinery
TUR	Leather Research and Training Institute Pendik Istanbul	E	Leather and leather products
TUR	Cement Research and Development Centre Eskisehir Yolu 8 km Ankara	E	Cement
TUR	Building Material Research Laboratory Ministry of Public Work and Settlement Eskisehir Yolu 8 km Ankara	E	Building Materials
TUR	Textile Training and Development Centre P.K. 350 Bursa	E	Textile
TUR	Pashabahce Glass Industry Training Centre Cayirova Istanbul	E	Glass
TUR	Erdemir Iron and Steel Training Centre Karadeniz Ereglisi Zonguldak	E	Iron and steel

TUR	Petrochemical Research, Development and Training Centre Petkim Izmir	E	Petrochemicals
TUR	Marmara Scientific and Industrial Research Institute Gebze, Kocaeli	E	- Foundry - Food processing technology - Building materials - Environmental control - Ceramics
TUR	Technical Education Faculty Gazi University Ankara	E	- Foundry - Metal working - Machine tools - Wood working
TUR	Railways Training Centre Eskisehir	E	Repair and maintenance of rolling stock
TUR	Small Industry Development Organization Ministry of Industry and Commerce Ankara	E	Small industry development
TUR	Industrial Training and Development Centre Selanik Caddesi No. 16 Ankara	E	Functional and sectoral industrial training
TUR	Industrial Project Preparation, Evaluation State Investment Bank Ankara	E	Industrial project preparation, evaluation and implementation
TUR	Repair and Maintenance of Bio-Medical and Electronic Equipment Ministry of National Education Ankara	E	Bio-medical and electronic equipment

TUR	Training Centre for Pulp and Paper Industry SEKA Izmit	E	Pulp and paper
TUR	Mineral Research and Exploration Institute Eskisehir Yolu Ankara	E	- Mineral exploration - Solar energy - feasibility studies
TUR	ETLIK Veterinery Control and Research Institute Ankara Turkey	E	Production of vaccine
TUR	Dairy Establishment of Turkey Ankara		Dairy products processing technology
TUR	PTT Training Centre Aydinlikevler Ankara	E	Development, production, repair and maintenance of telecommunication eqipment
TUR	Turkish Standard Institute Bakanliklar Ankara	E	Standardization and quality control
TUR	National Productivity Centre Ankara	E	Industrial management
TUR	ETIBANK Training Centre Ankara	E	Mineral prospecting and processing
TUR	Training Centre General Directorate of Highways Ankara	E	Fleet maintenance